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L9: Entry 38 of 38 File: DWPI Oct 28, 1981

DERWENT-ACC-NO: 1981-90256D
DERWENT-WEEK: 198149

TITLE: Glucose determn. using glucose-oxidase and mutarotase - and measuring substance formed or consumed by enzymic decomposition

PATENT-ASSIGNEE:

ASSIGNEE	CODE
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PRIORITY-DATA: 1980JP-0039726 (March 27, 1980)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 56137899 A	October 28, 1981		004	
JP 89019880 B	April 13, 1989		000	

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP56137899A	March 27, 1980	1980JP-0039726	

INT-CL (IPC): C12Q 1/54

ABSTRACTED-PUB-NO: JP56137899A
BASIC-ABSTRACT:

The method using fixed glucoseoxidase and fixed mutarotase together and measuring the concn. of the substance which is formed or consumed by the enzymic decomposition of glucose electrochemically. In aq. soln. glucose is in equilibrium of alpha-form and beta-form with the proportion 36:64 at 20 deg.C. Glucoseoxidase acts only on alpha-D-gluc ose and with the decomposition of alpha-D-glucose beta-D-glucose is converted to alpha-D-glucose. Usually the converting velocity of beta-form to alpha-form is much slower than the decomposing velocity and by conventional method the dermn. has been practiced without consuming glucose wholly. Thus the determn. has been practiced using known amt. of glucose as standard. But the proportion of alpha-form and beta-form depend upon temp, pH, amt. and kind of impurities, etc. and the change in the proportion causes determn error. By the invented method mutarotase is used for converting beta-D-glucose to alpha-D- glucose and glucose can be precisely determined with high sensitivity. Hydrogen peroxide or reduced-type redox cpd. can be used as the substance formed by the enzymic reaction and oxygen can be used as the substance consumed by the enzymic reaction.

TITLE-TERMS: GLUCOSE DETERMINE GLUCOSE OXIDASE MUTAROTASE MEASURE SUBSTANCE FORMING CONSUME ENZYME DECOMPOSE

DERWENT-CLASS: B04 D16 D17 E13

CPI-CODES: B04-B02C; B10-A07; B11-C08; B12-K04; D05-A02; E10-A07;

CHEMICAL-CODES: